वैज्ञानिक तथा औद्योगिक अनुसंधान परिषद्
Council of Scientific & Industrial Research
राष्ट्रीय वांतरिक्ष प्रयोगशालाएं
National Aerospace Laboratories

CSIR - NAL Estd. 1959
ISO 9001 : 2015
Certified Organization

INVITATION FOR BIDS/NIT

Tender No: CAD/PUR/2K19/158

CSIR- National Aerospace Laboratories (NAL), Bengaluru, India is one of the premier laboratories under Council of Scientific and Industrial Research (CSIR), an autonomous body under Department of Scientific and Industrial Research, Government of India, New Delhi. CSIR-NAL is a Science and Knowledge based Research, Development and Consulting Organization. It is internationally known for its excellence in Scientific Research in Aerospace Engineering.

The Director, CSIR-NAL invites online quotation for procurement of the following item(s) for day to day research work.

Sl.No.	Description of Items	Unit	Quantity
1	Accelerometer Sensor (As per the specification enclosed)	Nos	5
2	Cable, super low-noise 10-32 UNF to BNC, 3.0m (10ft), max.+250°C	Nos	15

Single / Double Bid	**Single**
Bid Security (EMD) (in INR)	Bid Securing Declaration Form to be submitted.

01. Tender Documents May be downloaded from Central Public Procurement Portal https://www.etenders.gov.in. Aspiring Bidders who have not enrolled/ registered in e- procurement should enroll/ register before participating through the website https://www.etenders.gov.in. The portal enrolment is free of cost. Bidders are advised to go through instructions provided at 'Instructions for online Bid Submission'.

02. Tenderers can access tender documents on the website (For searching in the NIC site https://www.etenders.gov.in, kindly go to Tender Search option, select tender type and select ' Council of Scientific and Industrial Research' in organization tab and select NAL-Bengaluru-CSIR' in department type Thereafter, Click on "Search" button to view all CSIR-NAL, Bengaluru tenders). Select the appropriate tender and fill them with all relevant information and submit the completed tender document online on the website https://www/etenders.gov.in as per the schedule given in the next page.

03. Either the Indian Agent on behalf of the Foreign principal or the Foreign principal can bid directly in a tender but not both. However, the offer of the Indian Agent should also accompany the authorization letter from their principal. To maintain sanctity of tendering system, one Indian Agent cannot represent two different foreign principals in one tender.

04. Unsolicited / conditional / unsigned tenders (Quotations) **shall not** be considered. Quotations received after the due date and time **shall be summarily rejected**.

05. The Bidder shall comply the terms and conditions of the tender, failing which; the offer shall be liable for rejection.

06. The Director, CSIR- National Aerospace Laboratories, Bengaluru reserves the right to accept any or all the tenders either in part or in full or to split the order without assigning any reasons there for.

Raman Kumar
Section Officer (S&P)
For & Behalf of CSIR-NAL

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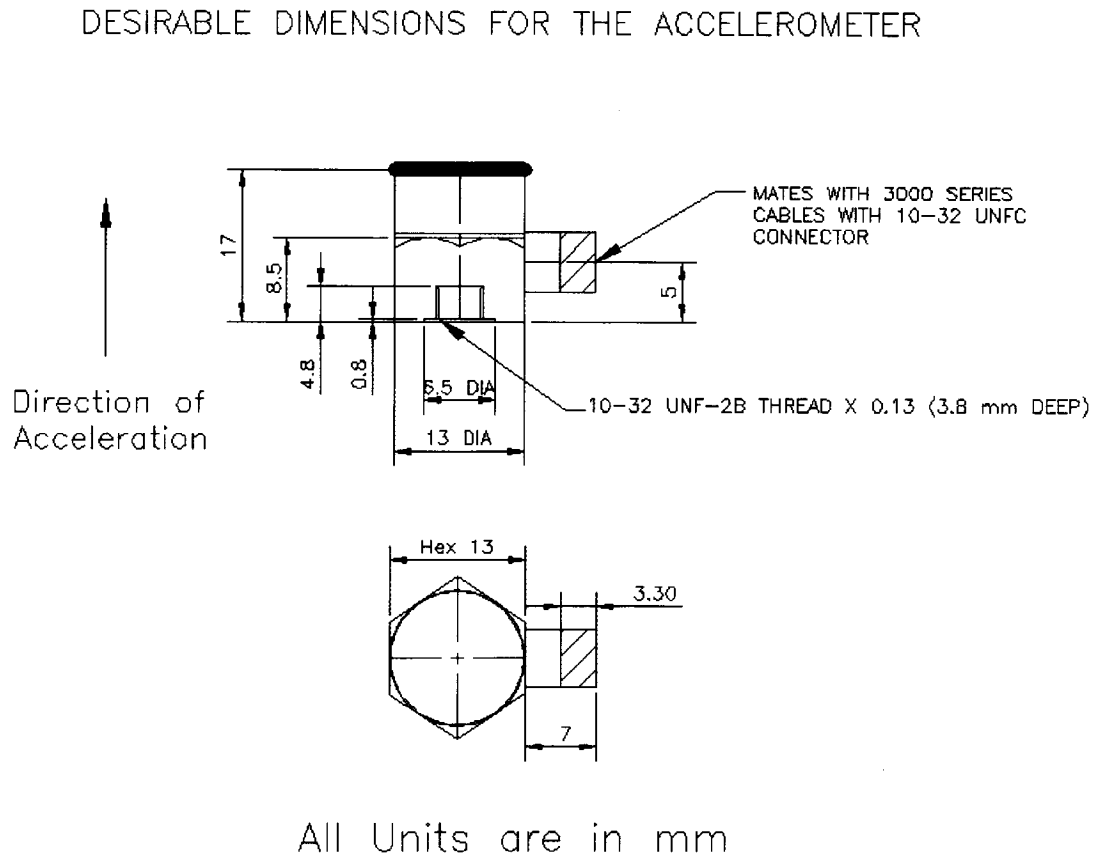
Annexure

Specifications for IEPE Accelerometer

General Characteristics		**Units**	**Specs**
Voltage Sensitivity (±10%)		(mV/g)	500
Frequency Range	Amplitude (±10%)	Hz	0.3 to 12k
	Phase (±5°)	Hz	2 to 10k
Mounted Resonance Frequency		kHz	30 and above
Maximum Transverse Sensitivity		%	≤ 5
Measuring Range		g	±10
Amplitude Linearity		%	≤ 1
Polarity			Acceleration directed into base produces +ve output
Electrical Characteristics			
Bias Voltage	at room temperature (25°C)	VDC	+12 to +14
	-55°C to +125°C	VDC	+8 to +16 (Preferably +12 to +14)
Power Supply Requirements	Current	mA	+2 to +20
	Supply voltage	VDC	+24 to +30 (or wider)
Output Impedance		Ω	<100
Start-up Time	(to final bias ± 10%)	s	< 30
Inherent Noise	Broadband 1 Hz to 10 kHz	µV (µg)	≤50 (100)
	Spectral	(µg/√Hz)	
	10 Hz		<15
	100 Hz		<5
	1000 Hz		<2
Insulation Resistance			Signal ground isolated from mounting surface
Environmental Characteristics			
Operating Temperature Range		°C	–55 to +125
Shock (peak)		G_{pk}	≥5k
Physical Characteristics			
Case Material			Titanium
Sealing			Hermetic
Weight		gram	<15
Electrical Connector			10–32 UNF

Mounting		10–32 UNF threaded stud

Desirable dimensions for the accelerometer



Other Requirements:

1. Calibration chart.
2. 10–32 UNF stainless steel mounting stud.
3. Cable: Super low-noise, 10-32 UNF (M) to BNC (M), 10m (33,3ft), Temp range up to +250°C or better. Cable should be of same OEM as that of the sensor.
4. COC (Certificate Of Conformance) is must.
5. Side Connector and Insulated base.
6. 1 Year Warranty.

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SCHEDULE CUM CRITICIAL DATE SHEET

1	Name of Organization	CSIR-National Aerospace Laboratories, Bengaluru	
2	Tender Reference No	**CAD/PUR/2K19/158**	
3	Tender Type (Open/Limited/EOI/Auction/Single)	**Open Tender**	
4	Type/Form of Contract (Work / Supply / Auction / Service / Buy / Empanelment / Sell)	Supply	
5	No of Covers (One/Two/Three/Four)	One	
6	Tender Category (Services/Good/Works)	Good	
7	Allow Resubmission (Only in online mode within scheduled period)	Yes	
8	Allow Withdrawal (Only in online mode within scheduled period)	Yes	
9	Allow Offline Submission	No	
10	Work Item Title	**1)Accelerometer Sensor (As per the specification enclosed) 2)Cable, super low-noise 10-32 UNF to BNC, 3.0m (10ft), max.+250°C**	
11	Work Description	**1)Accelerometer Sensor (As per the specification enclosed) 2)Cable, super low-noise 10-32 UNF to BNC, 3.0m (10ft), max.+250°C**	
12	Delivery Schedule	60 days from the date of purchase order	
13	Product Category (Civil Works / Electrical Works / Fleet Management / Computer Systems)	R & D Equipment	
14	Is Multi Currency Allowed	Yes	
15	a) Tender Publishing Date -	24 Dec 2019	1800 Hrs
	b) Document download start Date:	24 Dec 2019	1800 Hrs
	c) Bid Submission Start Date	24 Dec 2019	1800 Hrs
	d) Bid Submission End Date-	16 Jan 2020	1000 Hrs
	e) Bid Opening Date-	17 Jan 2020	1100 Hrs
16	Bid Validity Days	90 days	
17	Address for communication	Stores and Purchase Officer CSIR-National Aerospace Laboratories, HAL Airport Road, Kodihalli, Bengaluru - 560017	
18	Inviting Officer	Director, CSIR-NAL	
19	Contact No	25086097, 25086710	
20	E-mail Address	purchaseccadd@nal.res.in/spo@nal.res.in	
21	Detailed specification of item	Invitation for bids / NIT	
22	**Tender Terms & Conditions & Instruction for online bid submission**	**The prospective bidders are requested to refer to the Standard Tender Document available on NAL internet(www.nal.res.in) under the icon Tender-Purchase before formulating and submitting their bids.**	